It is possible that the tube may enter the larynx through an awkward position or movement of the patient. If the tube is pervious and haste is avoided, such a misadventure will be defeated through the restlessness of the patient and the escape of the air through the outer end of the tube.

Very truly yours,

S. S. SCHULTZ.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting held Tuesday Evening, April 3d, 1888.

THE PRESIDENT, C. L. DANA, M. D., IN THE CHAIR.

DR. A. ROCKWELL presented two cases of

BASEDOW'S DISEASE,

illustrating results which could not infrequently be obtained by treatment. The first case was that of a young lady who for a year and a half past had presented the three symptoms—protrusion of the eyes, swelling of the neck, and increased frequency of the pulse. The neck had measured fourteen inches, and the pulse had varied between 140 and 160, or above. Respiration had been 35, as a rule. After four months of treatment, consisting of dietetic regulation, internal medication, and electricity to the neck, the size of the goitre had been reduced one inch, the exophthalmus had diminished, and the pulse had diminished 60 beats. The patient's whole physical condition also had been changed, so that she could engage in the occupations and the enjoyments of life. At the end of treatment the pulse was 75 or 80. It had intermitted from the first, and it still retained this characteristic. Five years had elapsed since the discontinuance of treatment, and there had been no relapse.

The second case was that of a gentleman still under treatment. Out of thirty cases in the speaker's experience this was but the second in which he had encountered the disease in the male. The case was of an incomplete type. Great improvement had followed treatment.

Dr. W. M. LESZYNSKY presented a case of

ACUTE IDIOPATHIC NEURITIS OF THE BRACHIAL PLEXUS,

and read a paper embracing the history of the case, with carefully recorded electrical tests.

The patient was a man who had had an attack several years before, causing a painful and wasting paralysis of the right shoulder. This was followed recently by a second attack, involving the left shoulder. The areas of anæsthesia, local tenderness, and electrical reactions showed that nearly all the branches of the brachial plexus were involved. Syphilis, lead, and trauma were excluded.

DR. BIRDSALL, while acknowledging the difficulty of following the details of a written history, had the impression that the case presented was one of periarthritis, with neural involvement starting from the joint disease. Dr. Jacoby had reported a number of similar cases.

DR. JACOBY was inclined to the same view; yet he had understood that there had been no antecedent joint trouble either in the shoulder or the wrist.

DR. BIRDSALL added that in some cases the pain, the joint involvement, and the paralysis appeared together. Especially in the case of the shoulder there was often no antecedent history of joint involvement.

DR. DANA referred to Dr. Jacoby's article and asked whether the degeneration reaction had not been absent in his cases of arthritic paralysis.

DR. JACOBY replied that it had.

DR. BIRDSALL added that, while this had also been the experience of Erb, in some of his own cases the degeneration reaction had been obtained.

Dr. PUTNAM JACOBI asked how the electric resistance had been measured.

DR. LESZYNSKY replied that one electrode had been placed upon the hand, and the other upon the back of the neck. In reply to the objections, he stated that there had been no antecedent history of joint trouble. At the time of the paralysis of the deltoid the patient could move the joint without pain. The suffering occurred in paroxysms, and with each paroxysm fresh paralyses developed. The circumflex was first affected, the paralysis of the deltoid occurring on the twelfth day, the supra-spinatus and infra-spinatus on the twenty-fourth day, and the triceps on the twenty-sixth day, after a very severe attack of pain which required a large dose of morphia and chloral for its relief. Later, the subscapularis and teres major had been affected, and last the biceps, upon the forty-fifth day of the disease. Repeated examinations of the condition of the joints had been made, and the possibility of joint-affection had been excluded.

DR. GIBNEY had had the case under observation, and had been unable to arrive at any decision in regard to it.

DR. M. ALLEN STARR presented a paper upon.

SYRINGOMYELIA, ITS PATHOLOGY AND CLINICAL FEATURES, WITH EXHIBITION OF SPECIMENS, A STUDY OF A CASE, AND REMARKS UPON ITS DIAGNOSIS.*

Syringomyelia is a condition of the spinal cord in which abnormal cavities are present within the organ. The cavities are of two kinds: First, a dilatation of the central canal —hydromyelia. Of this two specimens were shown, in each of which the cavity was easily seen by the naked eye and the complete epithelial lining was visible under the microscope. The tissue around the dilated canal was normal. Secondly, a destruction of elements of the spinal cord—syringomyelia. The first stage of its pathology is the infiltration of the spinal cord near the central canal with round cells, connective-tissue nuclei, or gliomatous cells. A specimen showing this condition was exhibited. The next stage is the production of a felt-like connective tissue with numerous nuclei through the spinal cord, but especially near the central gray substance, pushing aside or destroying the spinal elements. This gliomatous mass has a tend-

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*Published in full in the *Amer. Jour. Med. Science*, May, 1888.

ency to break down in its centre, leaving a fissure or cavity whose walls are formed by the felt-like connective-tissue mass. The formation of such a cavity is the third stage of the pathological process. Specimens were shown illustrating these three stages, the specimens being from Schultze's cases and obtained partly from Schultze and partly from his pupil, Dr. Van Giesen. In some specimens the cavity was wholly independent of the central canal, which was pushed forward. In another the new cavity

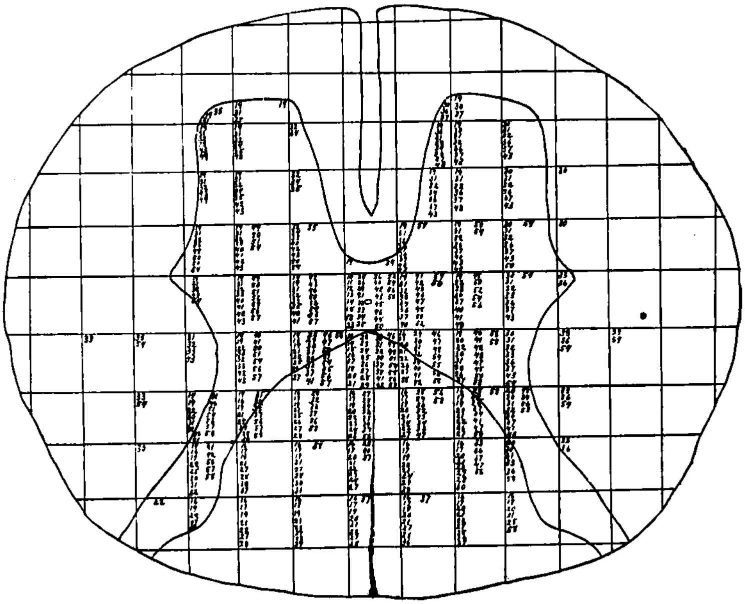

Diagram to show the extent of the cavity in the spinal cord in forty-eight cases. When the area represented by a square was invaded by disease, the number of the case is recorded in that square.

opened into the central canal, which appeared to have been dilated. In still others, no trace of the central canal was to be seen. The gliomatous infiltration about the cavity was evident in all the specimens. The size of the cavity varied greatly, from a small fissure to a large cavity around which only a thin rim of spinal tissue remained. The cavity in some cases extended only through a few segments of the cord. In other cases it reached through its entire length. The above diagram was shown representing its extent in a horizontal section of the spinal cord, the cord being divided into squares, and forty-eight cases being tabulated. The number of each case being placed in every square affected in the case, the greater number of squares numbered about the central area of the cord indicated the frequency with which this area was involved. The lower cervical and upper dorsal regions of the cord were the parts most frequently affected. The contents of the cavity is usually serous fluid, but may be bloody or thick and hyaline.

The clinical features of the disease were presented by means of a collection of typical cases accompanied by autopsies. They were found to be, first, progressive muscular atrophy with paralysis affecting some or all of the muscles of one limb, and usually extending to the opposite limb and to the trunk, sometimes attended by reaction of degeneration in the paretic muscles ; secondly, vaso-motor and trophic disturbances in the affected limb, consisting of cyanosis, coldness, bullous eruptions, ulceration, and abscess, and even atrophy and fragility of the bones and a diminution in the excretion of sweat ; thirdly, peculiar sensory disturbances, consisting of a loss of the sensations of pain and temperature in the atrophied part, while the senses of touch, pressure and location were preserved.

The distribution of these symptoms in accordance with the situation of the lesion in the cord was then fully discussed. In half the cases cited the anterior horns were involved and paralysis with atrophy was present. In two-thirds of the cases the posterior horns were involved, and the peculiar sensory disturbances were observed.

A case was then related in which the characteristic symptoms were present and in which the diagnosis of syringomyelia had been reached by exclusion, all other forms of spinal disease having been shown to be impossible. The differential diagnosis from amyotrophic lateral sclerosis, tabes, anterior polio-myelitis, meningitis, intraspinal tumor, and neuritis was considered in connection with this case. The paper closed with a reference to the etiology and treatment of the affection, regarding which little seems to be known.

Dr. Shaw said that about five weeks previously he had been consulted by a man, a German stevedore, who by his occupation was much exposed to the cold. The patient's complaint had been that he was unable to feel and protect himself from anything hot. The anæsthesia was especially marked in the right hand, but was present to some extent in the other also. As in Dr. Starr's case, there had been a burn on the right arm near the wrist, for which the patient could not account. There was no ataxia, no atrophy. There were no pupillary symptoms, and the optic nerve was normal. It seemed to him that this might have been a case of cavity of the cord similar to those of the cases described. He inquired, however, whether the origin of the condition was invariable. Might we not, for instance, have a cavity in the cord from malacia secondary to caries of the spine.

Dr. Sachs had been interested in the subject for several years. He had looked up the literature in connection with that of tumors of the cord, and he had also seen a number of living cases diagnosed by Schultze in Heidelberg. The clinical phenomena in Dr. Starr's case resembled those in Schultze's cases without doubt. He inquired, however, whether diagnosis between syringomyelia and intramedullary tumor was not difficult, especially at an early date. The duration of the condition would give a decisive indication at a later stage, as intramedullary tumors seldom lasted as long as two or three years. The difficulty of diagnosis was further increased by the fact that the symptoms so much resembled those of progressive muscular atrophy that the sensory manifestations might easily be neglected in favor of this diagnosis.

Dr. Birdsall recalled from his own experience, three cases presenting motor symptoms of the atrophic type, vaso-motor and some sensory symptoms, which he thought might be due to cavity in the cervical portion of the cord ; he had not yet arrived at an exact conclusion in the matter. There had been in these cases, too, cessations in the advancement of the disease. More careful observations would, he thought, lead to less frequent diagnoses of the typical or system diseases. There would be found many combinations of symptoms which did not correspond to these types. The system diseases, too, probably required to be divided up.

DR. BOOTH recalled a case of marked atrophy of the arm and hand with anæsthesis, so that burns were not felt.

DR. PUTNAM-JACOBI referred to the fact that in the cases cited a gliomatous tumor had served for the inception of the condition. She asked whether all cases of syringomyelia were referred to this origin. She also referred to the existence of vacuoles in the cord in pseudo-hypertrophic paralysis, in the medulla in tetanus, and in the condition of porencephalia in the brain. In five cases of pseudo-muscular hypertrophy there had been found dilatation of the central cavity or cavities in the posterior horns, although the correlation of the lesion with the paralysis had not been established.

DR. PETERSON referred to a case at the Manhattan Hospital where, in 1878, Dr. Seguin had diagnosed cavity of the cervical enlargement of the cord. The patient had presented atrophy of the left hand and arm with anæsthesia of the left arm, thorax, and leg.

DR. DANA suggested that many cases diagnosed cervical pachymeningitis should probaly have been classed as cases of this disease, as in Wichman's case. Dr. Starr had assumed that all cases of syringomyelia were gliomatous in origin. Might we have cavity-building from some other cause : He showed a specimen in which similar cavities had resulted from a central myelitis. There had been two cavities in this case, one one and a half inch long and the other not so large.

DR. STARR closed the discussion. The stationary condition in his case could be explained by the fact of the glioma having broken down and advancement having ceased. The process had been arrested. It was not possible to diagnose between intramedullary tumors and syringomyelia except as had been suggested by the duration of the case. The lesion had been discovered accidentally in some of the cases cited. The same had been true of multiple sclerosis in its first recognition. Then it had been diagnosed by exclusion, all cases not presenting typical symptoms being referred to it. Now syringomyelia received consideration also in the diagnosis of the anomalous cases. It might be of assistance to bear in mind that 24 out of the 56 cases had presented cavity in the anterior, and 32 out of 56 cavity in the posterior part of the cord. The chances were therefore in favor of the symptoms of progressive muscular atrophy or analgesic areas being present. In the examination it was necessary to distinguish between analgesia with loss of the temperature-sense and general tactile anæsthesia. Intermissions were not uncommon in other conditions. He had seen ataxia disappear and return after several months. The reaction of degeneration did not appear to be an important diagnostic point. The majority of the cases had been diagnosed as progressive muscular atrophy, a condition in which this reaction was not found. The condition of porencephalia referred to was a condition of childhood and fœtal life ; he did not think that it was ever found developing in the adult. The condition found in pseudo-hypertrophic paralysis has been a congenital deformity of the cord with abnormal fissures, but without gliomatous infiltration, and hence was entirely different from that here described. The age of the patients with syringomyelia had been twenty-five to forty years. In all of the cases observed the previous state had been that of infiltration with gliomatous cells. Destruction did not occur during this stage ; the elements of the cord were simply displaced.